Some Aspects for Raising of Economic Competitiveness of Dairy Farming

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SUMMARY

In Hungary the last decade the number of cattle stock practically has diminished 50% because of the unfavourable economic conditions. This fact and the nearing joining to EU reflect the important for developing dairy farming in the knew circumstances.

Theoretically the over production is favourable for the profitability, because of the decreasing of the specific stable cost. Unfortunately, this way is closed for the Hungarian dairy farming because of the quota system. Raising of the milk quality is more possible and real way for raising of the economic competitiveness in the milk farming, especially in lower classes.

In connection profit, price and cost it can be said, that the production cost of milk is lower at the private farms, but the milk price is higher at company farms every year. This means, that private farms are responsive to cost (more economical production, adaptation to environment, etc.), and the companies are responsive to price (higher milk quality, technical level, etc.). The two opposite tendencies result in higher income at private farms.

The production cost, of course, depends on a lot of factors (labour, technology, keeping, etc.) but the feed cost plays decisive role. The feed cost variation is 2-3 times more than the average milk cost variation, so we can say, that environmentally adapted milk production – throw the feed cost – will play decisive role in milk economics. This fact especially will be true in the next – quota system and guaranteed price!

Purpose of the investigation was to examine some opportunities for raising of competitiveness of dairy farming.

KEY WORDS

dairy husbandry, competitiveness, cost, price, profit

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INTRODUCTION

The importance of dairy enterprise lies in its contribution to the agricultural income of the farming community and the inevitable role of milk in the human nutrition from child to the adult. Unlike other agricultural activity, dairy enterprise generates the revenue and income stream throughout the year without any seasonal stoppage. Together with these important and favourable features, it must be emphasized, that dairy farming needs extremely high capital investment. From this side the rentability, the profitability, the accountancy come to the centre of the economic investigation of dairy farming.

Due to the recent enlarging of the European Union, the economic situation will change dramatically in Hungary too. The introduction of milk quota scheme, profit oriented farming, mainly private ownership emphasize the growing role of production costs. Probably, in the next the production costs will play decisive role of economic competitiveness of dairy enterprise.

Seeing the fact in the Hungarian milk production (table 1), we can observe a dramatically picture. During the last 12 years, stock of cattle practically has diminished 50% ! The total production has not decreased in the same proportion (to 77%) because of the growing specific production (to 119%). The reason is inevitable, in the changed economical situation (privatisation, market and profit oriented production) was not favourable for the dairy farming. Because of the falling profitability, the farmers diminished the production, cut the stock. The knew situation - joining to EU - probably will bring knew problems and knew challenges for the dairy enterprise too.

MATERIAL AND METHODS

The analysis of number and production of cattle carried out from datas of the Central Statistical Office. The investigation mentioned the period between 1990-2003, so the tendencies are quite reliable and stabile.

The distribution of dairy farming – type and number of dairy farmers, the number of stock – also was based up on datas of the Central Statistical Office. The period was only the last four years, because these datas represent the most alive picture of practice.

Most part of economic analysis based upon on the results of the Research and Information Institute for Agrarian Economics. The used cost, price and profit parameters practically represent the Hungarian milk production. There is a test farm system in observation with 1115 members from the 7 Hungarian regions and 19 counties.

A special investigation – effect of calving interval – was made by A.M. Safiullah as a part of his dissertation for the degree of candidate of science (Mosonmagyaróvár, 1995). The impact of various length of calving interval vas analysed by budgeting analysis using quatro spreadsheet program.

RESULTS

Over production

Theoretically the over production is favourable for the profitability, because of the decreasing of the specific stable cost. Unfortunately, this way is closed for the Hungarian dairy farming. There is less than two billion (1999,06 million) litres quota for Hungary, which means, that the present production is over than the next limit. Opportunity in this direction: growing quota or production without quota. All they are not the question of dairy farming, but question of economics policy.

Raising of milk quality

Raising of the milk quality is more possible and real way for raising of the economic competitiveness in the milk farming. At the present there is a four steps system in the Hungarian milk qualification by the biological cleanness – E, I-II-III classes – and over price by the procent of protein (basic 3,25%, 700 Ft/kg +-) and fat (basic 3,6%, 350 Ft/kg +-). In Hungary from January to May (2003) the result is the next:

Class	Average price Ft*/l	Differences in prices Ft/l
Extra	72,52	0,00
I.	69,80	2,72
II.	59,00	10,80
III.	52,60	6,40

* 250 Hungarian Ft equal one EUR

As the datas show, there is real opportunity in raising quality of milk for the price raising, but we have to account:

- dominant part of dairy farming catches 95-98% E class;
- the differences in prices is higher in the worse classes (6,40-10,80Ft/l).

Type of farm

In principle the type of farm can not play decisive role in competitiveness of dairy farming. Practically the question is most complicated because of the

- number of farms;
- scale of farms;
- interest system of farming.

As we see the figures of the table 2, in Hungary at the present time the cattle farming shows contrasted pictures. Number of private farm's forty-fifty times more than the company farms, but significant part of the stock – 65-68% - belongs to the company farms.

Table 1. Cattle livestock and cows' milk production in hungary

Year	Cattle		Of which: cow		Cows' milk production	
	1000 heads	%	1000 heads	%	million liters	liter/cow
1990	1 571	100	630	100	2 763,0	4 935
1995	928	59	421	67	1 919,6	4 893
2000	805	51	380	60	2 080,6	5 335
2001	783	50	368	58	2 079,7	5 516
2002	770	49	362	57	2 135,8	5 900

Resource: Hungarian Central Statistical Office

Table 2. Number and scale of cattle farms

Year	Farm type		Stock on a farm	
	Company	Private	Company	Private
2000	1017	51 164	567	5,4
2001	861	44 076	609	6,3
2002	813	38 006	620	7,3
2003	863	33 395	583	8,0

Table 3. Economy of milk production

Nomination		1999	2000	2001
Average cost (Ft*/l):	- in private farms	43,87	45,90	54,02
	- in companies	53,41	58,92	62,86
	Cost differences (Ft/l)	9,54	13,02	8,84
Price (Ft/l):	- in private farms	57,79	60,80	65,85
	- in companies	61,28	65,22	69,63
	Price differences (Ft/l)	3,49	4,42	3,78
Net incom (Ft/l):	- in private farms	13,92	14,90	11,83
	- in companies	7,87	6,30	6,77
	Income differences (Ft/l)	6,05	8,60	5,06

Recource: Research and Information Institute for Agrarian Economics; * 1 EUR = 250Ft

Table 4: Variability of production cost 2001

Nomination		Minimum (lower 10%)	Average	Maximum (higher 10%)	Difference between min. and. max.	
					Ft/l or Ft/kg	%
Cost of milk (Ft/l):	- in private farms	40,81	54,02	72,68	31,87	78,09
	- in companies	50,51	62,86	75,62	25,11	49,71
Cost of wheat (Ft/kg):	- in private farms	13,23	21,54	36,51	23,28	175,96
	- in companies	15,01	21,16	34,37	19,36	128,98
Cost of silage maize (Ft/kg):	- in private farms	2,63	3,40	7,51	4,88	185,55
	- in companies	2,10	4,05	7,94	5,84	278,09
Cost of lucerne hay (Ft/kg):	- in private farms	4,84	10,68	21,45	16,61	343,18
	- in companies	4,84	10,84	16,30	11,46	236,77

Resource: Research and Information Institute for Agrarian Economics

Number of company farms and stock in them are relatively stable, which shows opposite picture in private farms. Number of them during 4 years falled with 35%, but the stock number went up with 48%.

Economical result of the farm type shows the table 3. As we can observe, there is dominant differences between the two farm type. The production cost of milk is lower at the private farms, but the milk price is higher at company farms every year. This means, that private farms are responsive to cost (more economical production, adaptation to environment, etc.), and the companies are responsive to price (higher milk quality, technical level, etc.). The two opposite tendencies result in higher income at private farms.

Table 5. Lifetime profit and annual milk yield for different Calving Interval (CI)

Calving Interval	Lifetime profit		Annual milk yield	
(days)	(Ft)	(%)	(Kg)	(%)
360	267010	100	4590	100
390	256186	95,9	4387	95,6
420	230273	86,2	4285	93,4
450	196275	73,5	4212	91,8
>450	174555	65,4	3810	83,0

Resource: Safiullah A.M, 1995

Role of farm condition

The final tendency said above – lower cost result in higher income – involved to examine the cost variation in detail (Table 4). As the picture shows, there are extremely differences between the production cost in the same year depend on the current circumstances of the farm. The differences between the lower and higher results in private farms 78%, in companies 50%. This fact verifies the significance of farm condition and environment in milk economics.

Of course, production cost depends on a lot of factors (labour, technology, keeping, etc.) but the feed cost plays decisive role. As the figures show the feed cost variation is much more than average milk cost, variation so we can say, that environmentally adopted milk production – throw the feed cost – will play decisive role in milk economics. This fact especially will be true in the next – quota system and guaranteed price!

Calving interval

As the milk production goes by more year, the health of cows, cutting time, physical condition, etc. influence on economic parameters. One of them, calving interval (CI), expresses the common effect of the most breeding parameters. The next table 5 shows the result of different calving interval.

As the datas show, the shorter calving interval influences favourable for the income and annual milk yield too. The annual milk yield and profit got decreased as the CI increased from 360 days to more than 450 days. Interesting and important fact, that decrease of profit (35%) is higher than decrease of milk yield (17%). All that means, that good husbandry practice appears in good economy.

CONCLUSION

In Hungary the last decade the number of cattle stock practically has diminished 50% because of the unfavourable economic conditions. This fact and the nearing joining to EU reflect the important for developing dairy farming in the knew circumstances.

It is quite clear that over production can not raise economic competitiveness because of limited quota. Proving of milk quality helps without don't favourably the competitiveness likes as good and careful husbandry. In coming circumstances - quota and guaranteed price – the production cost probably will play decisive role in raising dairy farming. After the cost variations it can be emphasized, that the farm given – type, interest, scale, environmentally fundamentals – come to the centre of competitiveness.

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